




John L. Haynes
Research & Innovation Program Manager
FHWA - Utah Division

VTrans CM/GC WORKSHOP

Montpelier, Vermont


April 1, 2014





ALTERNATIVE CONTRACTING METHODS

CONSTRUCTION MANAGER/ GENERAL CONTRACTOR CONTRACTING



Agenda

- CM/GC Overview
- The Benefits of CM/GC
- The CM/GC Process
- Case Examples
- Keys to Success
- Additional Resources




Construction Manager/ General Contractor



CM/GC Overview

4




MAP-21 - Key Provisions

Section 1303

- Allows for the use of CM/GC contracting
- SEP-14 approval no longer required.


5



States with Enabling Legislation for CM/GC

1. Alaska	10. Nevada
2. Arizona	11. Oregon
3. California	12. Rhode Island
4. Colorado	13. Tennessee
5. Florida	14. Utah
6. Idaho	15. Vermont
7. Maryland	16. Washington
8. Michigan	
9. Minnesota	


6



States with CM/GC Experience

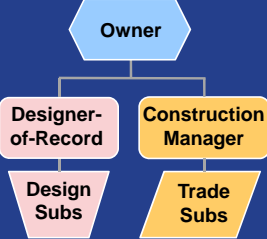
1. Alaska	6. Maine
2. Arizona	7. Maryland
3. Colorado	8. Minnesota
4. Florida	9. Oregon
5. Michigan	10. Utah
6. Nevada	11. Vermont

7




What is CM/GC?

- Contract with Designer
- Two Phase Contract with contractor
 - Phase I– Construction Management
 - Phase II –General Contracting



8



Why Use CM/GC?

The CM/GC contracting method is a good option on certain transportation projects, where unique challenges call for special qualifications and contractor involvement during the design phase for the success of the project.

9




CM/GC Project Delivery



The Benefits

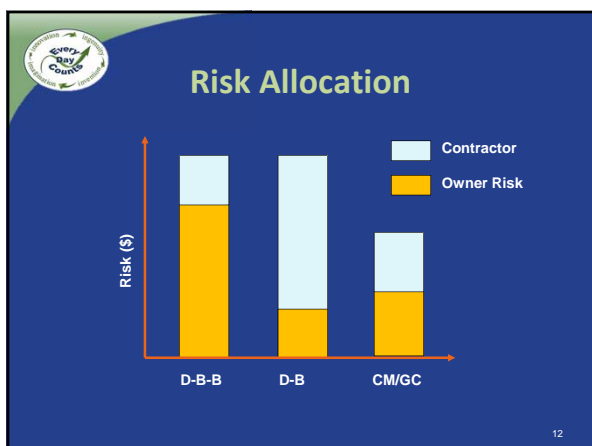
10



Benefits of CM/GC?

- Improved Cost Control
- Risk reduction & allocation
- Improved design quality
- Schedule optimization
- Collaboration
- Model to implement innovation

11





Collaboration Leads to Innovation Implementation



13



CM/GC Project Delivery



The Process


14



Project Team Selection

- **Designer:**
 - Qualifications Based Selection
- **Construction Manager:**
 1. Qualifications Based Selection
 2. Best Value Selection
 - Technical score
 - Price


15




CM/GC Services RFP

Sample evaluation criteria:

- Project Team/Capability of the Contractor
- Project Approach
- Project Innovations
- CM/GC Design Process
 - Risk Management
 - Decision Analysis and Resolution
 - CMGC Process Innovation
 - Schedule Management
- Price Proposal
- Approach to Price




16



CM/GC Sample Price Proposal Bid Form

Item No.	UDOT Specification	Item Description	Units	Quantity	Unit Price
10-	Roadway				
	Earthwork				
1	20560005	Borrow (Plan Quantity)	Cubic Yard	1,154,000	
2	20560020	Granular Borrow	Ton	333,253	
3	22310020	Clearing and Grubbing (Plan Quantity)	Acre	382	
4	23160020	Roadway Excavation (Plan Quantity)	Cubic Yard	338,028	
5	23180010	Small Ditch Excavation (Plan Quantity)	Cubic Yard	91,200	
	Drainage				
6	26101006	24 inch Culvert, Class A, Smooth	Feet	18,530	
7	26130040	Culvert End Section 24 inch	Each	199	
	Pavement				
8	27120010	Lean Concrete Base Course, 4 inch thick	Square Yard	305,475	
9	27210010	Untraveled Base Course	Ton	96,969	
10	27410060	HMA, 3/4 inch	Ton	25,095	
11	27520030	Portland Cement Concrete Pavement 11 inch Thick	Square Yard	305,475	
12	27710025	Concrete Curb and Gutter Type B1	Feet	63,797	
13	27760010	Concrete Sidewalk	Square Feet	330,646	

17



CM/GC Approach to Price Proposal

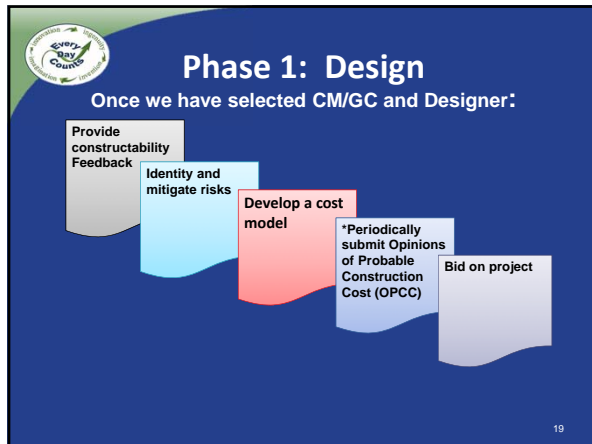
Sample approach to price basis:

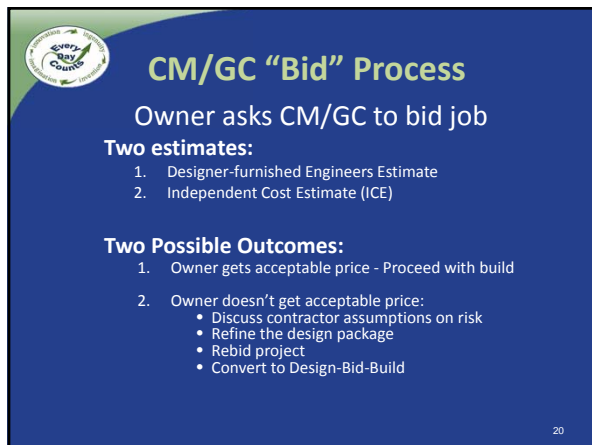
- Pricing for labor, materials, and equipment rates
- Field indirect items.
- Production rates / activities within bid items.
- Equipment and personnel usage
- Work hours for overtime.

Summary Narrative:

- Specific items in the estimate
- Escalation
- Fuel pricing
- Material sources
- Labor rates
- Availability of skilled craftsman
- Equipment availability and rental rates
- Temporary construction required

18









CM/GC on Large Projects

Zilwaukee Bridge; Saginaw, MI

- Replacing 114 Pier Bearings
- \$4 million savings to date
- Complex structure, with complex work operations





22



CM/GC on Large Projects

Sellwood Bridge Replacement, Multnomah County, Oregon




23




CM/GC on Medium Size Projects

State Route 9 -- Hurricane City, UT




- Gateway City to Zion National Park
- Additional lanes added in each direction.
- Third Party Issues = utilities, driveway access, businesses, and public concerns.

24



CM/GC on Medium Size Projects

State Route 9 -- Hurricane City, UT



- Contractor assisted with a 3-D utility map and relocation plan.
- During design phase contractor developed utility phasing plan and construction schedule

25



Smaller CM/GC Projects



Virgin River Trail

- Construction Manager helped determine trail alignment
- Contractor input eliminated blasting and minimized excavation
- Saved \$200,000 dollars



Bitter Creek Bridge

- Originally slated for full replacement .
- Resulted in simple bridge girder repair.
- Total construction cost: \$400,000 dollars

26



CM/GC Project Delivery



Keys to Success

27



Keys to Success

1. Give DOTs **a solid business case** for implementing a CM/GC program.
2. Contractor selection process is **transparent to local industry**.
3. DOTs and contractor industry have a **mature partnering environment**.
4. **Dedicated staff and a champion** dedicated to CM/GC deployment.

28




CM/GC Project Delivery



Wrapping Up

29




Recap of CM/GC Benefits

This method offers **significant advantages and benefits on unique projects**:

- Better designs = “value engineering” on the front end.
- Increased opportunities for time and cost savings
- Increased innovation
- Owner control of the design

30



Questions?

John Haynes
CM/GC Technical Leader
FHWA – Resource Center / Utah Division Office
Phone: (801) 955-3526
E-mail: john.haynes@dot.gov

31
